

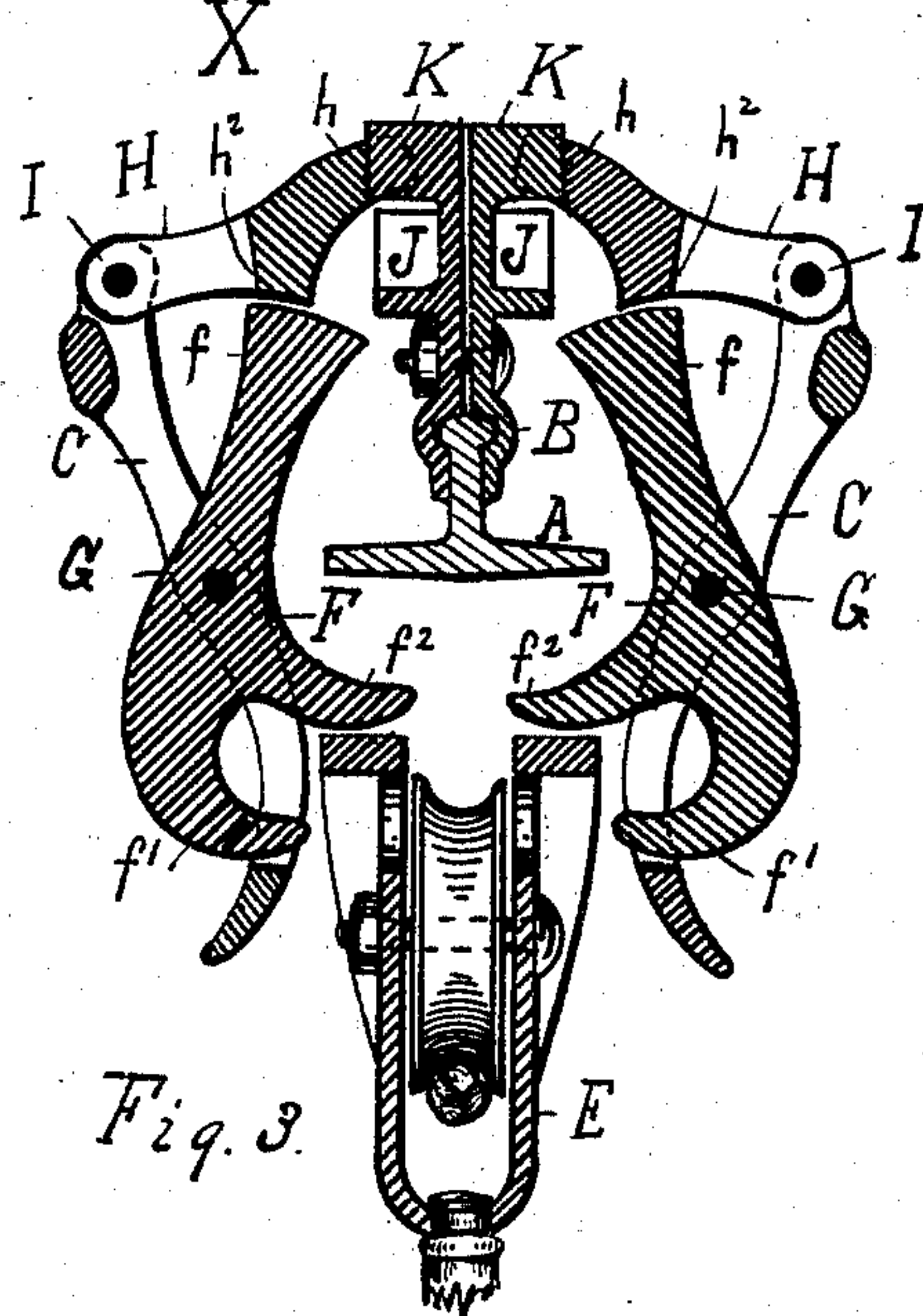
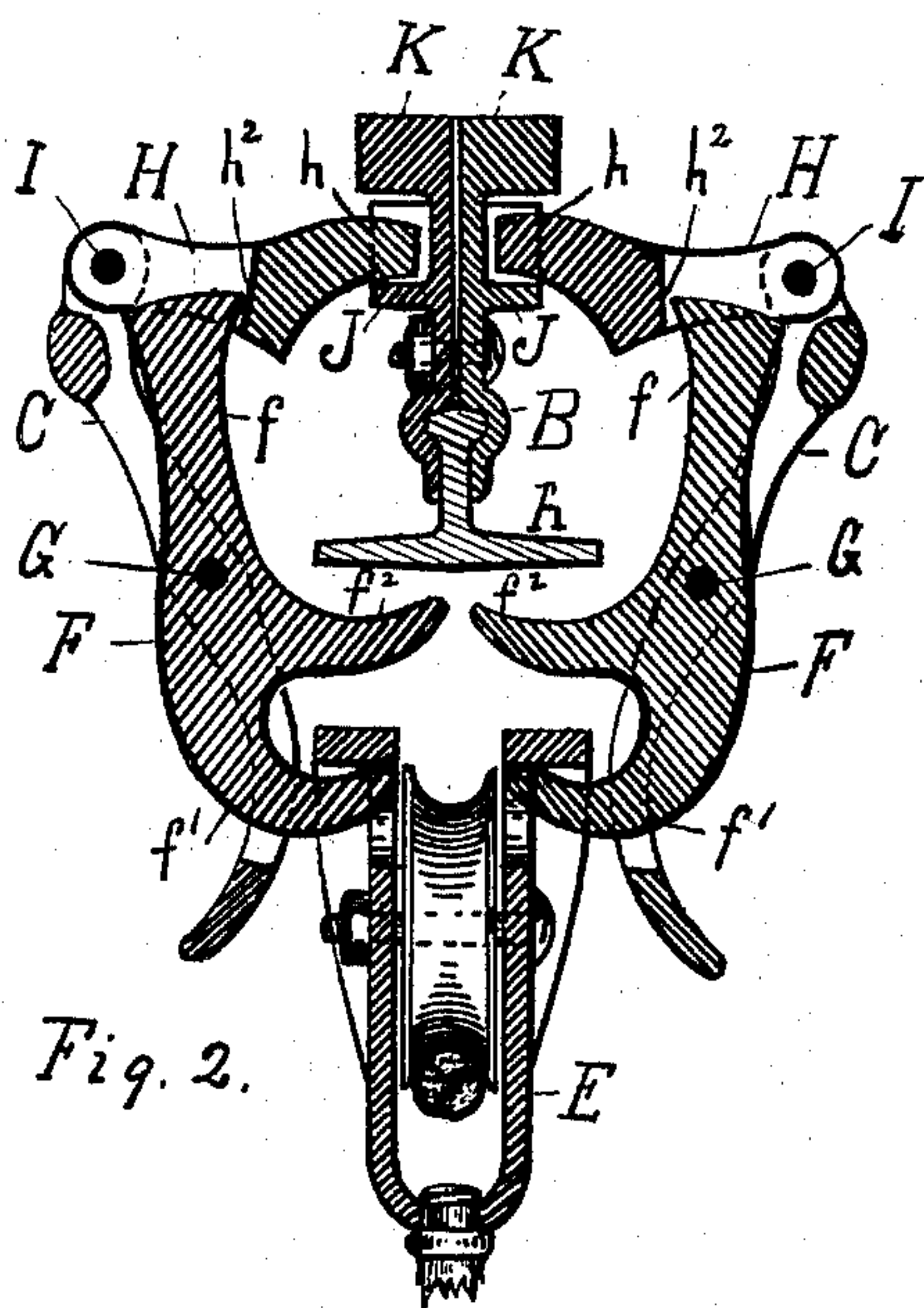
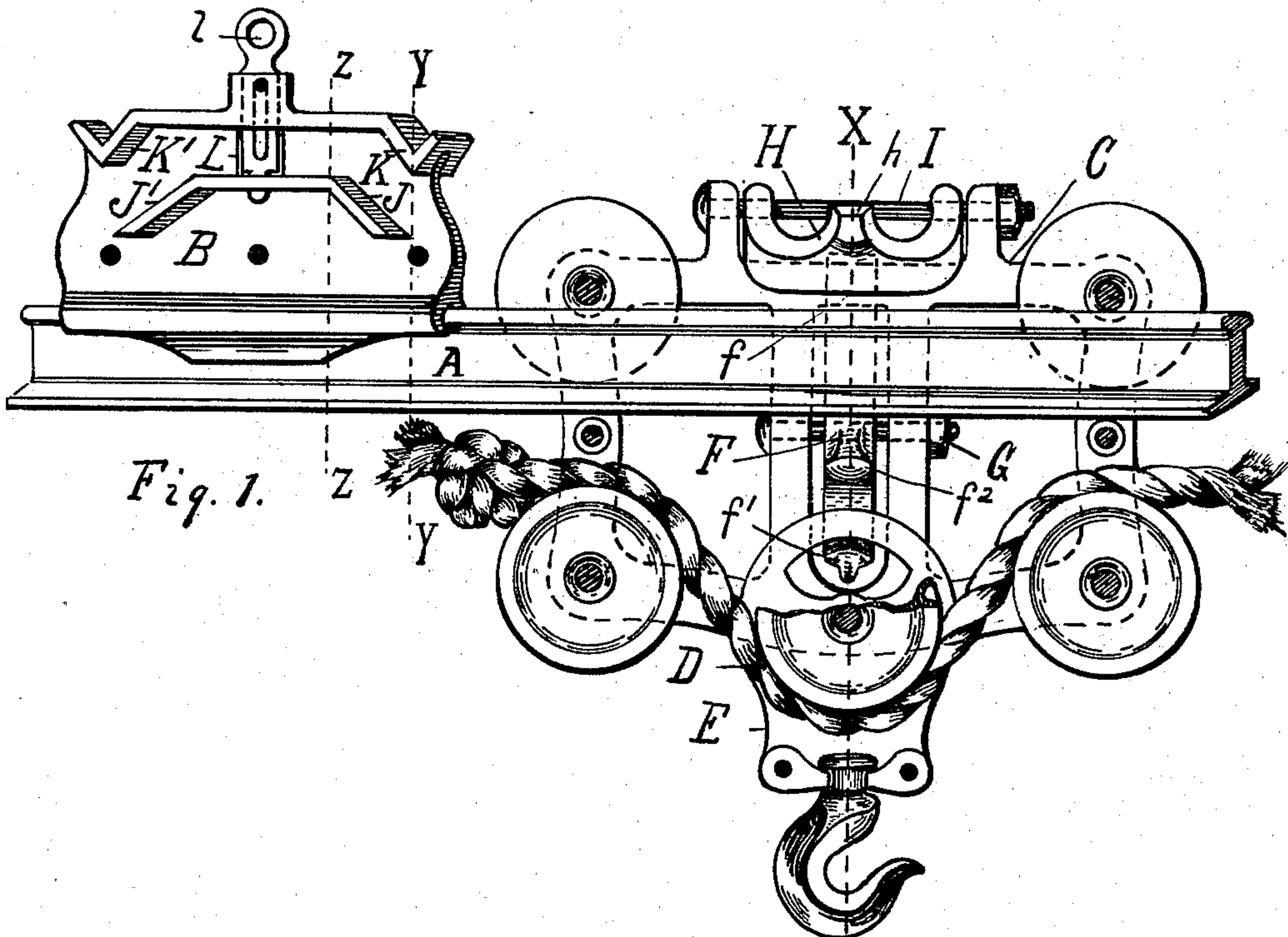
(No Model.)

2 Sheets—Sheet 1.

W. LOUDEN.
HAY CARRIER.

No. 589,902.

Patented Sept. 14, 1897.



Witnesses:

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G. S. Bishop

Inventor:

William Loudon.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

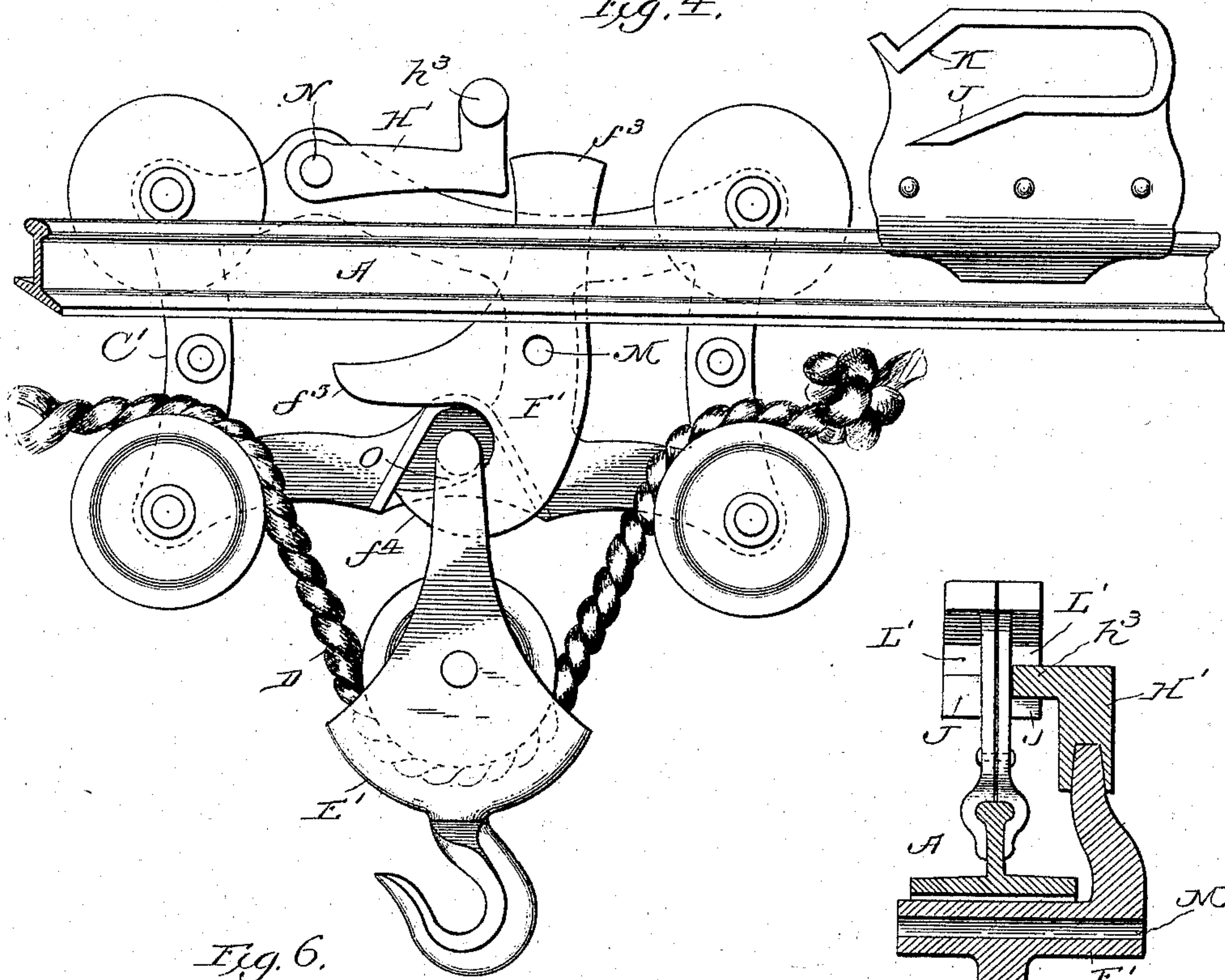


Fig. 6.

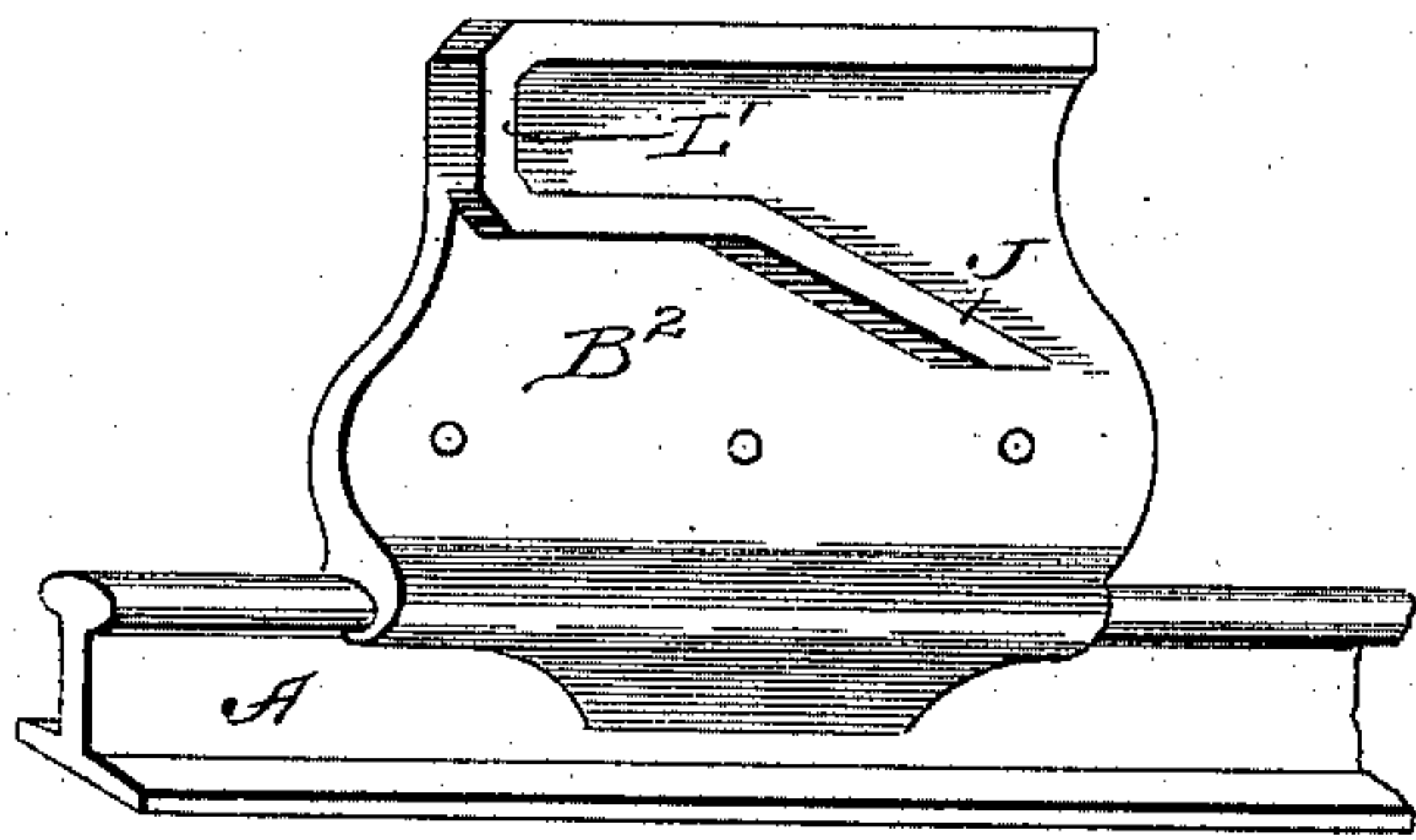


Fig. 5.

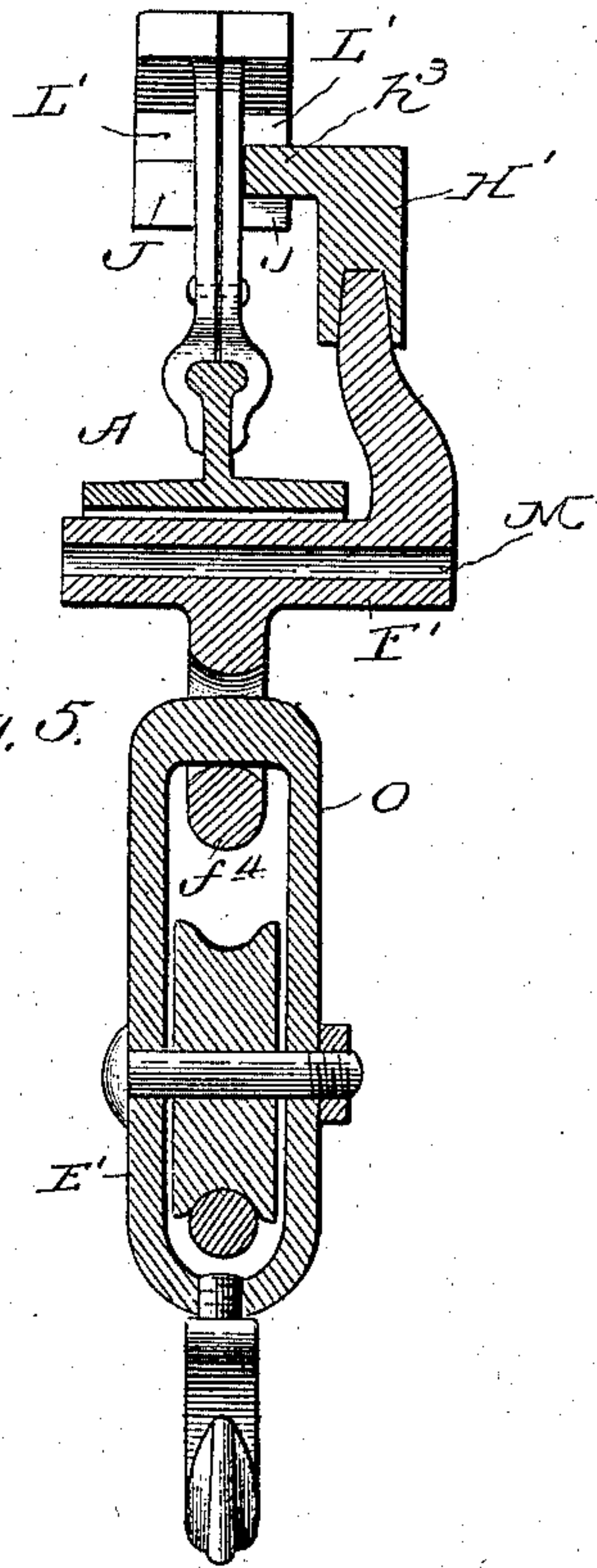
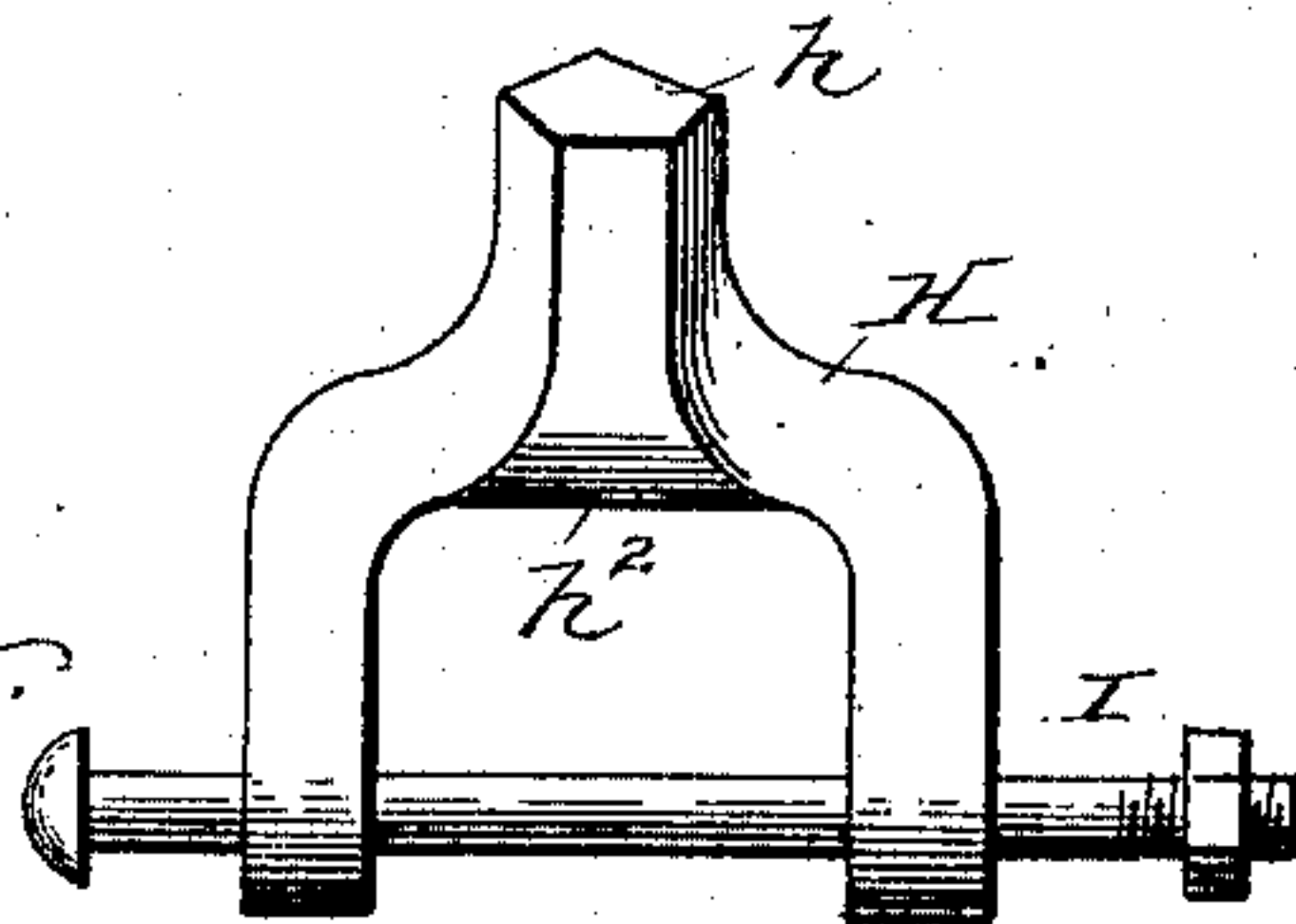


Fig. 7.



WITNESSES:

Harry S. Rohrer.
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INVENTOR

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UNITED STATES PATENT OFFICE.

WILLIAM LOUDEN, OF FAIRFIELD, IOWA.

HAY-CARRIER.

SPECIFICATION forming part of Letters Patent No. 589,902, dated September 14, 1897.

Application filed June 1, 1894. Serial No. 513,116. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LOUDEN, a citizen of the United States, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented a new and useful Improvement in Hay-Carriers, of which the following is a specification.

My invention relates to hay-carriers adapted to run on the edges of a centrally-suspended track-rail and having a grappling device pivoted in the carrier-frame to support the hoisting-block, a dog also mounted in the carrier-frame to hold the grappling device in position, and a stop-block secured to the track-rail to engage the dog; and it consists, first, of a stop-block secured to the upper edge of the track-rail, a dog hinged at one of its ends to the frame of the carrier at a point above the rail and the free end of said dog adapted to engage said stop-block, and a grappling device pivoted in an approximately vertical position to the frame of the carrier at a point adjacent to the lower edge of the track-rail, the lower end of said grappling device being adapted to support the hoisting-block below the track and its upper end to engage the dog above the track; second, of a stop-block secured to the track-rail, grappling-hooks pivoted to the frame of the carrier, so as to stand at right angles to the track, and dogs pivoted at their outer ends to the carrier-frame, so as to occupy a substantially horizontal position and to also stand at right angles to the track, the inner or free end of the dogs being adapted to engage the stop on the track and their central portions to engage the upper ends of the grappling-hooks, and, third, of other features hereinafter set forth, and pointed out in the claims.

Figure 1 is a side view of a carrier and track embodying the main features of my invention, the front side of the carrier-frame with the front track-wheels being removed to give a better view of the working parts. Fig. 2 is a vertical cross-section drawn on the line xx , Fig. 1, the carrier being moved along the track, so that the lines xx and yy will coincide. Fig. 3 is the same showing the hoisting-block released, the carrier being moved still farther along the track until the lines xx and zz will coincide. Fig. 4 is a side view of a modified form of the carrier,

the front side of the frame being removed to show the working parts. Fig. 5 is a vertical section drawn on the line vv of Fig. 4, the carrier-frame not being shown. Fig. 6 is a view of a modified form of stop for the track. Fig. 7 is a detail view.

The preferable form of my invention is shown by Figs. 1, 2, and 3, in which A represents the track-rail, B the stop-block secured thereto, and C is the carrier adapted to run on the lateral flanges of the track-rail. D is the hoisting-rope, and E the hoisting-block mounted thereon, all in the usual manner.

Grappling-hooks F are pivoted to the carrier-frame (one on each side) at G, so as to stand at right angles to the track-rail, and dogs H are pivoted at their outer ends to the carrier-frame by means of the bolts I, so as to stand also at right angles to the track and in a substantially horizontal position, the inner or free ends h of the dogs pointing toward each other and being adapted to slide up the inclines J of the stop B, and their central parts h^2 adapted to rest on the upper ends f of the grappling-hooks F. When in this position the inner ends or noses h of the dogs H will come in contact with the retaining-shoulders K of the stop B, as shown in Fig. 3, and will hold the carrier stationary on the track.

Power being applied to the hoisting-tackle the block E will come in contact with the fingers f^2 of the grappling-hooks and will cause them to turn on their pivots G and move the ends f out from the parts h^2 of the dogs H. The noses h of the dogs will then pass under the shoulders K of the stop B and release the carrier therefrom. At the same time the points f' of the hooks F will catch under the lips e of the pulley-block E and support it in position, the grappling-hooks being locked in position by their upper ends catching against the parts h^2 of the dogs H, as shown in Fig. 2. The carrier being returned to the stop B the noses h will slide up the inclines J until the ends f are released from the parts h^2 , which will permit the hooks F to turn and release the pulley-block E. The dogs H will then rest on the upper ends of the hooks F and will again hold the carrier stationary on the track, as before described.

The advantages of this construction are in

part as follows: The grappling-hooks F being pivoted at a point adjacent to the lower edge of the track with their lower ends adapted to support the pulley-block below and their upper ends to engage the dogs above the track the pulley-block E, with its load, may be brought closer than ever before to the track, and a smaller space will be required below it for the passage of the load.

As carriers of this class have been heretofore constructed the track-stop and the dog to engage it have generally been placed below the track, and when the stop has been secured to the upper edge of the track-rail the main part of the dog has been placed below to occupy space which is now utilized for the passage of the hay into the mow. In filling up the mow at the top and in carrying hay over high beams every inch of space that can be gained for the passage of the hay is of value, and in the construction herein described the carrier can be made more compact, and therefore lighter and at less cost; also, by hinging the dogs at their outer ends, so as to stand at right angles to the track, and having the grappling-hooks engage their central parts, while their inner free ends engage the stop-block on the track, the lock mechanism of the carrier will operate more easily than as heretofore constructed.

The dogs H are preferably made forked, as shown by a top view in Fig. 7, and are pivoted to the frame of the carrier at their forked ends. By this means while the noses of the dogs are entirely free to move vertically they are thoroughly braced against lateral displacement.

It is preferable to have a dog on each side to engage the inclines and retaining-shoulders on each side of the stop-block, and also a grappling-hook on each side to engage the dogs and both sides of the pulley-block, as shown in Figs. 2 and 3, but it is not strictly essential to the successful working of my invention. By a slight modification of the frame of the pulley-block, such as is known to those skilled in the art, a single dog to engage the stop-block and a single grappling-hook to engage the dog and pulley-block will suffice. A modification of this nature is shown in Figs. 4 and 5, and is further continued by pivoting the dog H and hook F, so as to move in a plane parallel with the track and carrier. The dog H' is pivoted at N and has a lug h^3 set at right angles to its body, which lug is adapted to slide up and down the incline J and catch against the shoulder K of the stop B'. The upper end f^3 of the hook F', which is pivoted at M, is adapted to engage the free end of the dog H' and its lower end f^4 to catch in the loop O of the pulley-block E.

The stop-blocks B and B' are constructed so as to prevent the dogs from passing entirely through them. The stop-block B', which is designed to operate the carrier in one direction only, has its end L' closed, so as

to form an abutment and positively close the passage therethrough, and the lug of the dog H' will pass in and out of it only at the opposite end. The stop-block B has inclines J and shoulders K at each end, so that the noses of the dogs H will pass in or out of either end in the manner heretofore described, and to arrest the movement of the carrier on the track a stop-bolt L is fitted in the center of the stop-block between the inclines, so as to come in contact with the noses of the dogs and prevent their passage therethrough.

To pass the carrier to the opposite end of the stop-block, the bolt L is lifted by means of a cord (not shown) secured to its eye l , or by other suitable means, and the noses of the dogs will then readily pass over the inclines J and under the bolt L from one end of the stop-block to the other. The advantage of this arrangement is that while the carrier may be operated from either end of the stop, as desired, it is prevented from running prematurely past the stop-block, a difficulty heretofore experienced in the use of stop-blocks having an incline at each end and an unobstructed passage over the said inclines.

Fig. 6 shows a stop-block having an incline J and closed end L', but no retaining-shoulder. This block is designed to be placed on the end of the track where the load is to be dumped, and its object is to release the dog or dogs from the grappling hook or hooks and permit the pulley-block to be lowered with its load.

What I claim is—

1. The combination of an elevated track and a carrier to run on the sides thereof, a stop-block secured to the upper edge of the track-rail, a dog mounted in the carrier-frame above the track and adapted to engage the stop-block thereon, a pulley-block for the carrier and a grappling-hook pivoted in the carrier-frame adjacent to the lower edge of the track-rail and adapted to engage the dog above the track and support the pulley-block below the track, substantially as described.

2. The combination of an elevated track and a carrier to run on the sides thereof, a stop-block secured to the upper edge of the track-rail, a dog pivoted at one end to the frame of the carrier above the track and its free end adapted to engage the stop-block thereon, a pulley-block for the carrier, and a grappling-hook pivoted in the carrier-frame adjacent to the lower edge of the track-rail and adapted to engage the dog above the track and support the pulley-block below the track, substantially as described.

3. The combination of a suspended track and a carrier to run thereon, a stop-block having an inclined face secured to the upper edge of the track-rail, a dog pivoted at one end to the frame of the carrier above the track, and its free end adapted to slide up the incline of said stop-block, a pulley-block for the carrier, and a grappling-hook pivoted in the carrier-frame adjacent to the lower

edge of the track-rail and adapted to engage the dog above while it supports the pulley-block below the track, substantially as described.

5 4. The combination of a suspended track and a carrier to run thereon, a stop-block having an inclined face and a retaining-shoulder secured to the upper edge of the track-rail, a dog pivoted at one end to the frame of the carrier above the track and its free end adapted to slide up the incline and catch against the shoulder of said stop-block, a pulley-block for the carrier, and a grappling-hook pivoted in the carrier-frame adjacent to the lower edge of the track-rail and adapted to engage the dog above it while it supports the pulley-block below the track, substantially as described.

5 5. The combination of a track and a carrier to run thereon, a stop-block secured to said track, a dog pivoted at its outer end to the frame of the carrier so as to stand in a horizontal position and at right angles to the track, and its inner end adapted to engage the stop thereon, and a grappling-hook pivoted to the carrier so as to stand in a vertical position and at right angles to the track and the upper end of the grappling-hook being adapted to engage the central part of the dog and its lower end to support the pulley-block, substantially as described.

6 6. The combination of a track and a carrier to run thereon, a stop-block secured to said track, a dog pivoted at its outer end to each opposite side of the frame of the carrier, the free ends of said dogs pointing toward each other and being adapted to engage the stop-block, a pulley-block for the carrier, a grappling-hook pivoted to each opposite side of the carrier-frame below the dogs, the lower ends of said grappling-hooks being adapted to support the pulley-block and their upper ends to engage the central parts of the dogs substantially as set forth.

7 7. The combination of a track and carrier thereon, a stop-block secured to the track and having an inclined face on each of its sides, a dog pivoted at its outer end to each opposite side of the carrier-frame, the free ends of said dogs pointing toward each other and being adapted to slide up the inclines of the stop-block, a pulley-block for the carrier, a grappling-hook pivoted to each opposite side of the carrier-frame below the dogs, the lower ends of said grappling-hooks being adapted to support the pulley-block and their upper ends to engage the central parts of the dogs, substantially as set forth.

8 8. The combination of a track and carrier to run thereon, a stop-block secured to the track and having an inclined face and a retaining-shoulder on each of its sides, a dog pivoted at its outer end to each opposite side of the carrier-frame, the free ends of said dogs pointing toward each other and being adapted

to slide up the inclines and catch against the retaining-shoulders of the stop-block, a pulley-block for the carrier, a grappling-hook pivoted to each opposite side of the carrier-frame below the dogs, the lower ends of said grappling-hooks being adapted to support the pulley-block and their upper ends to engage the central parts of the dogs, substantially as set forth.

9 9. The combination of a track and a carrier to run thereon, a stop-block secured to said track, dogs pivoted at their outer ends to the frame of the carrier, the outer pivoted ends of said dog being forked and their inner free ends being adapted to engage the stop-block, a pulley-block for the carrier, and grappling-hooks pivoted in the carrier-frame below the dogs and the lower ends of said grappling-hooks being adapted to support the pulley-block and their upper ends to engage the central parts of the dogs, substantially as described.

10 10. In hay-carriers, a stop-block secured to the track thereof, and having an inclined face on each of its ends to operate the lock mechanism of the carrier and an adjustable abutting-stop between said inclines which is adapted to be lifted to open the passage-way of the stop-block or lowered to entirely close it, substantially as described.

11 11. In hay-carriers, the combination of a stop having an inclined face on each of its sides and a pair of dogs hinged at their outer ends to the opposite sides of the carrier-frame so as to stand at right angles to the stop, said dogs being adapted to drop over and lock grappling devices to catch the hoisting-tackle, and their inner ends adapted to slide up the inclined faces of the stop and effect the release of the hoisting-tackle.

12 12. The combination of an elevated track, a carrier to straddle the track, a stop having inclined faces mounted upon the upper edge of the track, a pair of locking-dogs hinged at their outer ends to the opposite sides of the carrier-frame so as to stand at right angles to the stop, and in substantially a horizontal position, the inner ends of said dogs being adapted to be lifted by the inclined faces of the stop and a pair of grappling-hooks also pivoted in opposite sides of the carrier-frame, at right angles to the track and in substantially a perpendicular position, the lower ends of said grappling-hooks being adapted to catch the hoisting-tackle below the track, and their upper ends extended above the track to engage their respective dogs, and be locked to and released from the hoisting-tackle by the action of the dogs upon the stop.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIAM LOUDEN.

Witnesses:

A. M. SNYDER,
C. S. BISHOP.